

WHAT IS CLAIMED IS:

1. A computer-implemented method of purchasing items comprising:
storing first mapping information for a first plurality of items, the first
mapping information identifying a first plurality of purchasable units associated with items in
the first plurality of items;
receiving a purchase request comprising information related to a first project
from a computer system;
determining a second plurality of items from the information related to the
first project, the second plurality of items included in the first plurality of items;
determining a second plurality of purchasable units corresponding to the
second plurality of items based upon the first mapping information; and
communicating information related to the second plurality of purchasable
units to the computer system.

2. The method of claim 1 wherein receiving the purchase request
comprising information related to the first project comprises:
accessing a web page displaying the information related to the first project;
and
initiating the purchase request using the web page.

3. The method of claim 1 wherein:
the information related to the first project comprises a first project identifier
identifying the first project; and
determining the second plurality of items from the information related to the
first project comprises:
storing second mapping information for a plurality of project
identifiers, the plurality of project identifiers including the first project identifier, the second
mapping information associating at least one item from the first plurality of items with each
project identifier in the plurality of project identifiers;
based upon the second mapping information, determining items from
the first plurality of items associated with the first project identifier; and
including the items associated with the first project identifier in the
second plurality of items.

1 4. The method of claim 1 wherein determining a second plurality of items
2 from the information related to the first project comprises:

3 storing second mapping information for a first plurality of item
4 descriptors, the second mapping information associating each item descriptor in the first
5 plurality of item descriptors with at least one item from the first plurality of items;

6 extracting a second plurality of item descriptors from the information
7 related to the first project, the second plurality of item descriptors included in the first
8 plurality of item descriptors; and

9 determining the second plurality of items corresponding to the second
10 plurality of item descriptors based upon the second mapping information.

1 5. The method of claim 1 wherein the information related to the first
2 project comprises scaling information for the first project, the method further comprising:

3 determining, from the information related to the first project, quantities
4 associated with the second plurality of items; and

5 scaling the quantities associated with the second plurality of items based upon
6 the scaling information for the first project.

1 6. The method of claim 5 wherein scaling the quantities associated with
2 the second plurality of items comprises:

3 for each item in the second plurality of items:

4 determining a first value based on the scaling information; and

5 multiplying the quantity associated with the item by the first value to
6 determine a scaled quantity for the item.

1 7. The method of claim 6 wherein determining the second plurality of
2 purchasable units corresponding to the second plurality of items based upon the first mapping
3 information comprises determining items in the second plurality of purchasable items based
4 on the scaled quantities associated with items in the second plurality of items.

1 8. The method of claim 5 wherein scaling the quantities associated with
2 the second plurality of items comprises:

3 storing scaling rules indicating rules for scaling quantities associated with
4 items in the second plurality of items; and

5 for each item in the second plurality of items:

6 determining a first value based on the scaling information and the
7 scaling rule for the item; and
8 multiplying the quantity associated with the item by the first value to
9 determine a scaled quantity for the item.

1 9. The method of claim 1 wherein determining the second plurality of
2 purchasable units corresponding to the second plurality of items based upon the first mapping
3 information comprises:

4 for each item in the second plurality of items:
5 based upon the first mapping information, determining purchasable
6 units from the first plurality of purchasable units associated with the item; and
7 including the purchasable units associated with the item in the second
8 plurality of purchasable units.

1 10. The method of claim 1 further comprising outputting the information
2 related to the second plurality of purchasable units.

1 11. The method of claim 10 wherein outputting the information related to
2 the second plurality of purchasable units comprises:
3 generating a presentation list based upon information related to the second
4 plurality of purchasable units; and
5 displaying the presentation list.

1 12. The method of claim 11 wherein the presentation list is generated
2 based upon user preferences.

1 13. The method of claim 1 wherein the first project is selectable from a
2 group of projects including a recipe for preparing a food dish, a project for building a
3 computer, a project to repair a leaking faucet, and a project to build a house.

1 14. A computer-implemented method of purchasing items comprising:
2 storing first mapping information for a first plurality of items, the first
3 mapping information identifying a first plurality of purchasable units corresponding to the
4 first plurality of items;
5 receiving a purchase request comprising information related to a first project
6 and a second project from a computer system;

7 determining a second plurality of items from the information related to the
8 first project, the second plurality of items included in the first plurality of items;
9 determining a third plurality of items from the information related to the
10 second project, the third plurality of items included in the first plurality of items;
11 determining a fourth plurality of items including items from the second
12 plurality of items and the third plurality of items;
13 determining a second plurality of purchasable units corresponding to the
14 fourth plurality of items based upon the first mapping information; and
15 communicating information related to the second plurality of purchasable
16 units to the computer system.

1 15. The method of claim 14 wherein:
2 the second plurality of items includes a first item and a first quantity
3 associated with the first item;
4 the third plurality of items includes the first item and a second quantity
5 associated with the first item; and
6 determining the fourth plurality of items including items from the second
7 plurality of items and the third plurality of items comprises:
8 including the first item in the fourth plurality of items; and
9 associating a third quantity with the first item in the fourth plurality of
10 items, wherein the third quantity is a sum of the first quantity and the second quantity.

1 16. The method of claim 15 wherein:
2 the first quantity is associated with a first unit of measure;
3 the second quantity is associated with a second unit of measure; and
4 associating the third quantity with the first item in the fourth plurality of items
5 comprises:
6 if the first unit of measure is different from the second unit of measure,
7 converting the second quantity to a fourth quantity having the first unit of measure; and
8 determining the third quantity by adding the first quantity and the
9 fourth quantity.

1 17. A computer-implemented method of purchasing items for a first
2 project comprising:

3 storing an information model comprising information for a first plurality of
4 items, the information describing attributes of the first plurality of items, substitute items for
5 the first plurality of items, and hierarchical relationships between the items in the first
6 plurality of items,

7 storing first mapping information for the first plurality of items, the first
8 mapping information identifying a first plurality of purchasable units associated with items in
9 the first plurality of items;

10 receiving a purchase request comprising information related to the first project
11 from a computer system;

12 determining a second plurality of items from the information related to the
13 first project, the second plurality of items included in the first plurality of items;

14 determining a second plurality of purchasable units corresponding to the
15 second plurality of items based upon the information stored by the information model and the
16 first mapping information; and

17 communicating information related to the second plurality of purchasable
18 units to the computer system.

1 18. The method of claim 17 wherein determining the second plurality of
2 purchasable units corresponding to the second plurality of items based upon the information
3 stored by the information model and the first mapping information comprises:

4 determining a substitute item for at least one item in the second plurality of
5 items based upon information stored by the information model;

6 determining a purchasable unit corresponding to the substitute item based
7 upon the first mapping information; and

8 including the purchasable unit corresponding to the substitute item in the
9 second plurality of purchasable units.

1 19. The method of claim 17 wherein the hierarchical relationships between
2 items in the first plurality of items include a first relationship between a first item and a
3 second item from the first plurality of items, the first relationship indicating that the second
4 item is a specialization of the first item.

1 20. The method of claim 17 wherein the hierarchical relationships between
2 items in the first plurality of items include a first relationship between a first item and a

3 second item from the first plurality of items, the first relationship indicating that the second
4 item is a component of the first item.

1 21. A computer-implemented method of shopping for a project
2 comprising:
3 accessing a web page displaying information related to the project;
4 generating a purchase request based upon the information related to the
5 project;
6 in response to the purchase request, receiving information related to a plurality
7 of purchasable units, the plurality of purchasable units corresponding to a plurality of items
8 described by the information related to the project; and
9 selecting at least one purchasable unit from the plurality of purchasable units
10 for purchase.

1 22. A system for purchasing items comprising:
2 a first computer system; and
3 a second computer system coupled to the first computer system;
4 wherein the second computer system is configured to:
5 store first mapping information for a first plurality of items, the first
6 mapping information identifying a first plurality of purchasable units associated with items in
7 the first plurality of items;
8 receive a purchase request comprising information related to a first
9 project from the first computer system;
10 determine a second plurality of items from the information related to
11 the first project, the second plurality of items included in the first plurality of items;
12 determine a second plurality of purchasable units corresponding to the
13 second plurality of items based upon the first mapping information; and
14 communicate information related to the second plurality of purchasable
15 units to the first computer system.

1 23. The system of claim 22 wherein:
2 the information related to the first project comprises a first project identifier
3 identifying the first project; and
4 in order to determine the second plurality of items from the information
5 related to the first project, the second computer system is configured to:

6 store second mapping information for a plurality of project identifiers,
7 the plurality of project identifiers including the first project identifier, the second mapping
8 information associating at least one item from the first plurality of items with each project
9 identifier in the plurality of project identifiers;

10 based upon the second mapping information, determine items from the
11 first plurality of items associated with the first project identifier; and

12 include the items associated with the first project identifier in the
13 second plurality of items.

1 24. The system of claim 22 wherein in order to determine a second
2 plurality of items from the information related to the first project, the second computer
3 system is configured to:

4 store second mapping information for a first plurality of item
5 descriptors, the second mapping information associating each item descriptor in the first
6 plurality of item descriptors with at least one item from the first plurality of items;

7 extract a second plurality of item descriptors from the information
8 related to the first project, the second plurality of item descriptors included in the first
9 plurality of item descriptors; and

10 determine the second plurality of items corresponding to the second
11 plurality of item descriptors based upon the second mapping information.

1 25. The system of claim 22 wherein the information related to the first
2 project comprises scaling information for the first project, and the second computer system is
3 further configured to:

4 determine, from the information related to the first project, quantities
5 associated with the second plurality of items; and

6 scale the quantities associated with the second plurality of items based upon
7 the scaling information for the first project.

1 26. The system of claim 25 wherein in order to scale the quantities
2 associated with the second plurality of items, the second computer system is configured to:

3 for each item in the second plurality of items:

4 determine a first value based on the scaling information; and

5 multiply the quantity associated with the item by the first value to

6 determine a scaled quantity for the item.

27. The system of claim 26 wherein in order to determine the second plurality of purchasable units corresponding to the second plurality of items based upon the first mapping information, the second computer system is configured to determine items in the second plurality of purchasable items based on the scaled quantities associated with items in the second plurality of items.

28. The system of claim 25 wherein in order to scale the quantities associated with the second plurality of items, the second computer system is configured to:

- store scaling rules indicating rules for scaling quantities associated with items in the second plurality of items; and
- for each item in the second plurality of items:
 - determine a first value based on the scaling information and the scaling rule for the item; and
 - multiply the quantity associated with the item by the first value to determine a scaled quantity for the item.

29. The system of claim 22 wherein in order to determine the second plurality of purchasable units corresponding to the second plurality of items based upon the first mapping information, the second computer system is configured to:

for each item in the second plurality of items:

based upon the first mapping information, determine purchasable units from the first plurality of purchasable units associated with the item; and

include the purchasable units associated with the item in the second plurality of purchasable units.

30. The system of claim 22 wherein the first computer system is configured to output the information related to the second plurality of purchasable units received from the second computer system.

31. A data-processing system for purchasing items comprising:
a storage device; and
a processor coupled to the storage device,
the storage device storing a program for controlling the processor, and
the processor operative with the program to:

6 receive a purchase request comprising information related to a first
7 project and a second project from a computer system;
8 determine a second plurality of items from the information related to
9 the first project, the second plurality of items included in the first plurality of items;
10 determine a third plurality of items from the information related to the
11 second project, the third plurality of items included in the first plurality of items;
12 determine a fourth plurality of items including items from the second
13 plurality of items and the third plurality of items;
14 determine a second plurality of purchasable units corresponding to the
15 fourth plurality of items based upon the first mapping information; and
16 communicate the information related to the second plurality of
17 purchasable units to the computer system.

1 32. The system of claim 31 wherein:
2 the second plurality of items includes a first item and a first quantity
3 associated with the first item;
4 the third plurality of items includes the first item and a second quantity
5 associated with the first item; and
6 in order to determine the fourth plurality of items including items from the
7 second plurality of items and the third plurality of items, the processor is further operative
8 with the program to:
9 include the first item in the fourth plurality of items; and
10 associate a third quantity with the first item in the fourth plurality of
11 items, wherein the third quantity is a sum of the first quantity and the second quantity.

1 33. The system of claim 32 wherein:
2 the first quantity is associated with a first unit of measure;
3 the second quantity is associated with a second unit of measure; and
4 in order to associate the third quantity with the first item in the fourth plurality
5 of items, the processor is further operative with the program to:
6 if the first unit of measure is different from the second unit of measure,
7 convert the second quantity to a fourth quantity having the first unit of measure; and
8 determine the third quantity by adding the first quantity and the fourth
9 quantity.

1 34. An apparatus for purchasing items for a first project comprising:
2 a processor;
3 a memory coupled to the processor, the memory configured to store:
4 an information model comprising information for a first plurality of
5 items, the information describing attributes of the first plurality of items, substitute items for
6 the first plurality of items, and hierarchical relationships between the items in the first
7 plurality of items,
8 first mapping information for the first plurality of items, the first
9 mapping information identifying a first plurality of purchasable units associated with items in
10 the first plurality of items; and
11 a plurality of code modules for execution by the processor, the
12 plurality of code modules comprising:
13 a code module for receiving a purchase request comprising
14 information related to the first project from a first computer system;
15 a code module for determining a second plurality of items from
16 the information related to the first project, the second plurality of items included in the first
17 plurality of items;
18 a code module for determining a second plurality of
19 purchasable units corresponding to the second plurality of items based upon the information
20 stored by the information model and the first mapping information; and
21 a code module for communicating information related to the
22 second plurality of purchasable units to the first computer system.

1 35. The system of claim 34 wherein the code module for determining the
2 second plurality of purchasable units corresponding to the second plurality of items based
3 upon the information stored by the information model and the first mapping information
4 comprises:
5 a code module for determining a substitute item for at least one item in the
6 second plurality of items based upon information stored by the information model;
7 a code module for determining a purchasable unit corresponding to the
8 substitute item based upon the first mapping information; and
9 a code module for including the purchasable unit corresponding to the
10 substitute item in the second plurality of purchasable units.

1 36. The system of claim 34 wherein the hierarchical relationships between
2 items in the first plurality of items include a first relationship between a first item and a
3 second item from the first plurality of items, the first relationship indicating that the second
4 item is a specialization of the first item.

1 37. The system of claim 34 wherein the hierarchical relationships between
2 items in the first plurality of items include a first relationship between a first item and a
3 second item from the first plurality of items, the first relationship indicating that the second
4 item is a component of the first item.

1 38. A data-processing system for shopping for a project comprising:
2 a processor;
3 a memory coupled to the processor, the memory configured to store a plurality
4 of code modules for execution by the processor, the plurality of code modules comprising:
5 a code module for accessing a web page displaying information related
6 to the project;
7 a code module for generating a purchase request based upon the
8 information related to the project;
9 in response to the purchase request, a code module for receiving
10 information related to a plurality of purchasable units, the plurality of purchasable units
11 corresponding to a plurality of items described by the information related to the project; and
12 a code module for selecting at least one purchasable unit from the
13 plurality of purchasable units for purchase.

1 39. A computer program product stored on a computer-readable storage
2 medium for purchasing items, the computer program product comprising:
3 code for storing first mapping information for a first plurality of items, the first
4 mapping information identifying a first plurality of purchasable units associated with items in
5 the first plurality of items;
6 code for receiving a purchase request comprising information related to a first
7 project from a computer system;
8 code for determining a second plurality of items from the information related
9 to the first project, the second plurality of items included in the first plurality of items;

code for determining a second plurality of purchasable units corresponding to the second plurality of items based upon the first mapping information; and
code for communicating outputting information related to the second plurality of purchasable units to the computer system.

40. The computer program product of claim 39 wherein the code for receiving the purchase request comprising information related to the first project comprises:
code for accessing a web page displaying the information related to the first project; and
code for initiating the purchase request using the web page.

41. The computer program product of claim 39 wherein:
the information related to the first project comprises a first project identifier identifying the first project; and
the code for determining the second plurality of items from the information related to the first project comprises:
code for storing second mapping information for a plurality of project identifiers, the plurality of project identifiers including the first project identifier, the second mapping information associating at least one item from the first plurality of items with each project identifier in the plurality of project identifiers;
based upon the second mapping information, code for determining items from the first plurality of items associated with the first project identifier; and
code for including the items associated with the first project identifier in the second plurality of items.

42. The computer program product of claim 39 wherein the code for determining a second plurality of items from the information related to the first project comprises:
code for storing second mapping information for a first plurality of item descriptors, the second mapping information associating each item descriptor in the first plurality of item descriptors with at least one item from the first plurality of items;
code for extracting a second plurality of item descriptors from the information related to the first project, the second plurality of item descriptors included in the first plurality of item descriptors; and

code for determining the second plurality of items corresponding to the second plurality of item descriptors based upon the second mapping information.

43. The computer program product of claim 39 wherein the information related to the first project comprises scaling information for the first project, the computer program product further comprising:

code for determining, from the information related to the first project, quantities associated with the second plurality of items; and
code for scaling the quantities associated with the second plurality of items based upon the scaling information for the first project.

44. The computer program product of claim 43 wherein the code for scaling the quantities associated with the second plurality of items comprises:

for each item in the second plurality of items:

code for determining a first value based on the scaling information;

and

code for multiplying the quantity associated with the item by the first value to determine a scaled quantity for the item.

45. The computer program product of claim 44 wherein the code for determining the second plurality of purchasable units corresponding to the second plurality of items based upon the first mapping information comprises code for determining items in the second plurality of purchasable items based on the scaled quantities associated with items in the second plurality of items.

46. The computer program product of claim 43 wherein the code for scaling the quantities associated with the second plurality of items comprises:

code for storing scaling rules indicating rules for scaling quantities associated with items in the second plurality of items; and

for each item in the second plurality of items:

code for determining a first value based on the scaling information and the scaling rule for the item; and

code for multiplying the quantity associated with the item by the first value to determine a scaled quantity for the item.

1 47. The computer program product of claim 39 wherein the code for
2 determining the second plurality of purchasable units corresponding to the second plurality of
3 items based upon the first mapping information comprises:

4 for each item in the second plurality of items:
5 based upon the first mapping information, code for determining
6 purchasable units from the first plurality of purchasable units associated with the item; and
7 code for including the purchasable units associated with the item in the
8 second plurality of purchasable units.

1 48. The computer program product of claim 39 further comprising code for
2 outputting the information related to the second plurality of purchasable units.

1 49. The computer program product of claim 48 wherein the code for
2 outputting the information related to the second plurality of purchasable units comprises:
3 code for generating a presentation list based upon information related to the
4 second plurality of purchasable units; and
5 code for displaying the presentation list.

1 50. The computer program product of claim 49 wherein the presentation
2 list is generated based upon user preferences.

1 51. A computer program product stored on a computer-readable storage
2 medium for purchasing items, the computer program product comprising:
3 code for storing first mapping information for a first plurality of items, the first
4 mapping information identifying a first plurality of purchasable units corresponding to the
5 first plurality of items;
6 code for receiving a purchase request comprising information related to a first
7 project and a second project from a computer system;
8 code for determining a second plurality of items from the information related
9 to the first project, the second plurality of items included in the first plurality of items;
10 code for determining a third plurality of items from the information related to
11 the second project, the third plurality of items included in the first plurality of items;
12 code for determining a fourth plurality of items including items from the
13 second plurality of items and the third plurality of items;

14 code for determining a second plurality of purchasable units corresponding to
15 the fourth plurality of items based upon the first mapping information; and
16 code for communicating information related to the second plurality of
17 purchasable units to the computer system.

1 52. The computer program product of claim 51 wherein:
2 the second plurality of items includes a first item and a first quantity
3 associated with the first item;
4 the third plurality of items includes the first item and a second quantity
5 associated with the first item; and
6 the code for determining the fourth plurality of items including items from the
7 second plurality of items and the third plurality of items comprises:
8 code for including the first item in the fourth plurality of items; and
9 code for associating a third quantity with the first item in the fourth
10 plurality of items, wherein the third quantity is a sum of the first quantity and the second
11 quantity.

1 53. The computer program product of claim 52 wherein:
2 the first quantity is associated with a first unit of measure;
3 the second quantity is associated with a second unit of measure; and
4 the code for associating the third quantity with the first item in the fourth
5 plurality of items comprises:
6 if the first unit of measure is different from the second unit of measure,
7 code for converting the second quantity to a fourth quantity having the first unit of measure;
8 and
9 code for determining the third quantity by adding the first quantity and
10 the fourth quantity.

1 54. A computer program product stored on a computer-readable storage
2 medium for purchasing items for a first project, the computer program product comprising:
3 code for storing an information model comprising information for a first
4 plurality of items, the information describing attributes of the first plurality of items,
5 substitute items for the first plurality of items, and hierarchical relationships between the
6 items in the first plurality of items,

code for storing first mapping information for the first plurality of items, the first mapping information identifying a first plurality of purchasable units associated with items in the first plurality of items;

code for receiving a purchase request comprising information related to the first project from a first computer system;

code for determining a second plurality of items from the information related to the first project, the second plurality of items included in the first plurality of items;

code for determining a second plurality of purchasable units corresponding to the second plurality of items based upon the information stored by the information model and the first mapping information; and

code for communicating information related to the second plurality of purchasable units to the first computer system.

55. The computer program product of claim 54 wherein the code for determining the second plurality of purchasable units corresponding to the second plurality of items based upon the information stored by the information model and the first mapping information comprises:

code for determining a substitute item for at least one item in the second plurality of items based upon information stored by the information model;

code for determining a purchasable unit corresponding to the substitute item based upon the first mapping information; and

code for including the purchasable unit corresponding to the substitute item in the second plurality of purchasable units.

56. The computer program product of claim 54 wherein the hierarchical relationships between items in the first plurality of items include a first relationship between a first item and a second item from the first plurality of items, the first relationship indicating that the second item is a specialization of the first item.

57. The computer program product of claim 54 wherein the hierarchical relationships between items in the first plurality of items include a first relationship between a first item and a second item from the first plurality of items, the first relationship indicating that the second item is a component of the first item.

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1 58. A computer program product stored on a computer-readable storage
2 medium for shopping for a project comprising:
3 code for accessing a web page displaying information related to the project;
4 code for generating a purchase request based upon the information related to
5 the project;
6 in response to the purchase request, code for receiving information related to a
7 plurality of purchasable units, the plurality of purchasable units corresponding to a plurality
8 of items described by the information related to the project; and
9 code for selecting at least one purchasable unit from the plurality of
10 purchasable units for purchase.

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